

REMARKS

Claim Rejections – 35 USC §112

The Examining Attorney rejected Claims 2, 7, 10, 24, and 26 under 35 USC §112 as failing to comply with the written description requirement. In particular that independent claims 1, 6, 23 and 25 recite that the bottom surface of the second ends of the lamination support members are disposed on the horizontal surface, while the dependent claims 2, 7, 24 and 26 recite that the bottom surface of the lamination supports are disposed on the first and second die boards. There is no disclosure in the Specification of the bottom surface of the second end of the lamination support members being disposed on the horizontal surface and the second die board.

The Applicant has amended independent Claims 1, 6, 24 and 26 to more particularly point out and distinctly claim that which the Applicant regards as his invention. In particular, these claims have been amended to include a limitation that addresses the location of the second end of the lamination support members.

The Applicant has amended dependent Claims 2, 7, 24 and 26, adding the limitations of Claims 1, 6, 23 and 25 to make Claims 2, 7, 24 and 26 independent. Claim 10 now depends from new independent Claim 7. Thus independent Claims 1, 6, 24 and 26 now include the limitation of the second end of the second ends of the lamination support members being disposed on the horizontal surface and new independent Claims 2, 7, 24 and 26 include the limitation of the second end of the second ends of the lamination support members being disposed on the second die board. The original drawings contain the disclosure to support these claims and no new matter has been added.

Based upon these amendments, Claims 2, 7, 10, 24 and 26 are now enabling and also particularly point out and distinctly claim that which the Applicant regards as his invention with the requisite clarity.

Claim Rejections 35 USC §§102 and 103

11. The Examining Attorney has rejected Claims 1, 2, 4, 6, 7, 12, 23-26 under 35 USC §102(b) as being anticipated or in the alternative, under 35 USC §103(a) as obvious over *Brown* (US Patent No. 4,471, 710). The Examining Attorney states “Brown discloses an apparatus with a planar horizontal surface, a first die board disposed on the planar horizontal surface, and a plurality of lamination support members with bottom surfaces on the first curved upper surface of the first die board (see figure 6). As to the limitation that the bottom surface adjacent a second end of the lamination support members is disposed upon the horizontal surface, the apparatus in Brown is considered to be capable of this limitation when assembling the parts together, prior to the last die boards being assembled to the lamination support members. Alternatively, it would have been well within the purview of one of ordinary skill in the art at the time of the invention to assemble the apparatus as shown in Brown by assembling the lamination support members onto the first die board member at the end of the apparatus at which point the bottom surface of the second end of the lamination support members would be disposed on the horizontal surface. Only the expected results would be attained.”

Applicant respectfully traverses this rejection. The invention disclosed in *Brown* is a “Method of Manufacturing and Applications of a Building Panel having a Compound or Complex Curve” – Invention Title. The present invention does not address such compound or complex curves. “It is a further object of this invention to provide a mass producible panel curved along major and minor axes from planar strips which are easily mass produced. The above and other objects are achieved by providing a mold which has a surface curved in both major and minor axes, said surface being one of a family of surfaces which can be made from a layer of geometrically identical strips. With such a mold, the geometrically identical strips can be

mass produced out of any suitable building material and bonded together in a layer or layers as desired.” Column 2, lines 7-17 (Emphasis added).

In contrast to *Brown*, the present invention is designed to produce panels curved along only a single axis rather than along major and minor axes. Further, *Brown* requires that a mold be provided which has surfaces curved in both major and minor axes. This mold must be permanently constructed for the fabrication of the desired curved panels. The mold, as shown in **Figure 6**, includes a series of parallel die boards, each of which is of different dimensions to accommodate the desired compound curve. That is, each die board must be both higher and wider than its predecessor to achieve the desired curve. As shown in this figure, each of the die boards must be notched to accommodate a series of curved support slats. These slats must be secured to the notches in order for the mold to retain its shape. The resulting mold can be used only to form curved panels of the particular shape related to the mold.

The present invention requires only that one (Claims 1, 6, 23 and 25), or two (Claims 2, 7, 24 and 26) flat, two dimensional die boards be prepared having the desired curved upper surface. A series of identical, reusable lamination support members are then assembled upon the curved upper surface or surfaces of these die boards. A laminated panel curved along one axis may then be formed on top of the lamination support members. A series of identical panels (as in for a set of cabinet doors) may be formed using the same set up. The die boards can then be replaced with die boards having different curves and the lamination support members can be reused. The lamination support members are not permanently attached to the die boards, as in *Brown*, and likewise are not curved. Furthermore, in *Brown*, the die boards are notched, whereas in the present invention, there is no need for such notching. *Brown*'s invention is a series of

substantially identical panels that can be formed over a permanent, mold having a compound curved shape and formed to produce only that shape. The present invention is a mold having reusable components that can be used to form laminations curved along a single axis.

With respect to the Examining Attorney's statement "As to the limitation that the bottom surface adjacent a second end of the lamination support members is disposed upon the horizontal surface, the apparatus in Brown is considered to be capable of this limitation when assembling the parts together, prior to the last die boards being assembled to the lamination support members.", the Examining Attorney is attempting to disassemble a portion of the disclosure of *Brown* to construct the instant invention.

"The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge cannot come from the applicant's invention itself." *In re Oetiker*, 24 USPQ 2d 1443, 1446 (Fed. Cir. 1992).

In order to accomplish this feat, it would be necessary to remove a single die board from the pre-existing mold used in *Brown*, fill in the notches in the die board, straighten the curved support slats, and provide sufficient number of them to cover the upper curved surface of the die board while resting their second ends on a horizontal surface. Applicant finds no suggestion or teaching in *Brown* to attempt this construction to form laminated panels curved along one axis.

With respect to the Examining Attorney's statement "As to claims 2, 24, Brown shows a second die board with a curved upper surface and a lower surface on the horizontal surface and the bottom surfaces of the lamination support members disposed on the first and second curved upper surfaces of the first and second die boards.", the construction described here requires that the die boards be notched and the support slats be curved and secured to the die boards to produce a surface suitable for forming a panel curved along both major and minor axes as described above. Here again, a fixed, permanent mold is being deconstructed to use the components, after suitable adaptations, to form the instant invention. See *In re Oetiker*, supra.

With regards to the Examining Attorney's statement "As to claim 4, the lamination support members are rectangular in cross section.", the support slats (lamination support members) of *Brown* are necessarily curved to accommodate the compound curves required for the invention. In contrast, the lamination support members of the present invention are necessarily straight (and unsecured) to provide for the simple (one axis) curve desired. As such, the support slats of *Brown* are different in form and function from those of the present invention.

With respect to the Examining Attorney's statement "As to claims 6 and 7, 25 and 26, the lamination support members have notches to fit over the die boards (see figure 6).", as is clear from **Figure 6**, it is the die boards that have the notches to accommodate the lamination support members and not vice versa.

With regards to the Examining Attorney's statement "As to claim 12, the first die board has an upward facing curve surface.", the upward facing curved surface of the present invention extends from the first side to the second side of the first die board (see **Figure 12** of the instant invention). In contrast, the die boards of the mold of *Brown* appear to be curved from a first side

edge to a second side edge as shown in **Figure 6**. There is no indication or perceived need for the die boards of *Brown* to be curved from a first side surface to a second side surface.

As *Brown* lacks the reusable lamination support members and unnotched die boards found in the present invention, Claims 1, 2, 4, 6, 7, 12 and 23-26 should be patentable over this reference.

12. With respect to the Examining Attorney's statement "Claims 3, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 4,471,710) as applied to claim 1, 6 above, and further in view of conventional practice.

As to claim 3 where the lamination support members are cylindrical, it would have been well within the purview of one of ordinary skill in the art at the time of the invention to provide lamination support members of any desired cross section, in particular cylindrical. Only the expected results would be attained. As to claim 13, it would have been well within the purview of one of ordinary skill in the art at the time of the invention to provide lamination support members of any desired cross section, including an upper curved surface in order to provide the desired mold surface, it is noted that the members form a curved surface in the apparatus. Only the expected results would be attained.", the Examining Attorney has provided no reference or source to support the statement that use of cylindrical lamination support members or those with a curved upper surface would be within the purview of one ordinarily skilled in the art. Further, as Claim 3 depends from Claim 1, and Claim 13 depends from Claim 6, both of which should be allowable, Claims 3 and 13 should likewise be allowable.

13. With regards to the Examining Attorney's statement "Claims 5, 8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 4,471,710) as applied to

claims 1, 6 above, and further in view of Lang (US Patent No. 4,971,743), Giorgi (US Patent No. 3,856,592), and/or Barnett (US Patent No. 1,545,576).

It is considered conventionally well known in the art to provide a resilient insulating material between a mold and the product to be molded in order to protect the product and provide a uniform pressure against the product during molding. For example, the references Lang, Giorgi, and/or Barnett all disclose providing a resilient material for insulating products during molding. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the mold apparatus as shown in Brown with an insulating material as is well known in the art and further exemplified by Lang, Giorgi, or Barnett. Only the expected results would be attained.”, none of the references cited disclose a method or apparatus for forming laminations curved about a single axis using reusable components, as does the present invention. Further, as Claims 5 and 8 depend from Claims 1 and 6, which should now be allowable, these claims should also be allowable.

14. With respect to the Examining Attorney’s statement “Claims 9, 10, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 4,471,710) as applied to claims 6 above, and further in view of Vogelsang (US Patent No. 3,444,568).

It is unclear what the exact shape of the notches in Brown are, however it would have been well within the art at the time of the invention to provide the notches with a variety of well known shapes as desired for the particular application. For example, Vogelsang discloses notches with downwardly facing curves and an orifice connected to the sidewalls (see figure 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus as shown in Brown with a variety of shaped notches as are considered well known in

the art and exemplified by Brown in order to provide the particular desired shape.”, while use of notches is clearly well known, notches of a particular design for a particular purpose are not. Neither *Brown* nor *Vogelsang* disclose notches of the design shown in the instant invention in combination with reusable lamination support members for forming laminations curved along one axis. The notches in *Brown*, as discussed above, are in the die board rather than the lamination support members. The notches of *Vogelsang* are designed for use with an intersecting series of flexible strips forming a lattice for building boat hulls. The notches of *Vogelsang* are specifically designed to permit the strips to flex so that compound curves can be formed. In contrast, the notches of the present invention are not designed to impart any flexibility, but only to assist in assembling the lamination support members onto the die boards. There is no suggestion or teaching in *Brown* or *Vogelsang* to use the notches disclosed to provide the functionality found in the present invention.

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. . . “[The Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1988).

Absent such a showing, Claims 9, 10, 14, 15 should be allowable. Further, these claims depend directly or indirectly from Claims 6 and 7, which should now be allowable, therefore making these claims allowable as well.

Allowable Subject Matter

15. The Examining Attorney states "Absent any additional prior art, Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 11 depends from Claim 6, which has been amended as discussed above to more particularly point out and distinctly claim that which the Applicant regards as the invention. Further, based upon the above arguments with respect to rejections under 35 USC §§102(b) and 103(a), Claim 6 should now be allowable. Likewise, Claim 11 should also be allowable.

Applicant submits, therefore, that with the above-suggested changes to the claims and based on the above arguments, the application is now in condition for allowance.

A credit card form in the amount of \$226.00 is enclosed in payment for additional independent claims and additional multiple dependent claims now present in the application. No new matter has been added. Also, please find enclosed a credit card form authorizing a charge of \$210.00 as the fee for a two (2) month extension of time for a small entity.

Respectfully submitted,

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